

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of claims:

1-36. (Cancelled)

37. (Currently amended) A water craft including a chassis portion, at least four water engaging means and interconnection means,

each water engaging means being connected to the chassis portion and being moveable in a substantially vertical direction relative to the chassis portion,

the interconnection means including a plurality of rams and a plurality of fluid conduits, each ram being disposed between a water engaging means and the chassis portion and each ram being fluidly connected to at least one other ram associated with at least one other water engaging means using at least one fluid conduit; and

the interconnection means being arranged to functionally link the at least four water engaging means such that simultaneous movement of all water engaging means is permitted when adjacent water engaging means move in opposite substantially vertical directions, and such that when two adjacent water engaging means are urged during use to move in the same substantially vertical direction relative to the chassis portion, an opposite two adjacent water engaging means are restricted from moving in a substantially opposite vertical direction relative to the chassis portion, and the chassis portion is thereby encouraged to maintain an orientation which is substantially constant relative to the average plane of the water surface;

characterized in that the water craft further ~~composes~~ comprises means for controlling the orientation of the water engaging means relative to the average plane of the water surface during use.

38. (Previously Presented) A water craft as claimed in claim 37, wherein the interconnection means is arranged to functionally link the water engaging means such that, for any loading condition, the static load on each water engaging means remains substantially constant even when the water engaging means are not all disposed in the same plane.

39. (Previously Presented) A water craft as claimed in claim 37, wherein the interconnection means is arranged to functionally link the water engaging means such that statically the proportion of weight borne by a first pair of oppositely located water engaging means relative to the weight borne by a second pair of oppositely located water engaging means is substantially constant.

40. (Previously Presented) A water craft as claimed in claim 37, wherein each water engaging means is associated with two rams, each ram being fluidly connected to a ram associated with an adjacent water engaging means.

41. (Previously Presented) A water craft as claimed in claim 37, wherein the water engaging means are disposed in a diamond shaped configuration relative to the chassis portion when viewed in plan.

42. (Previously Presented) A water craft as claimed in claim 37, wherein the water engaging means are disposed in a rectangular shaped configuration relative to the chassis portion when viewed in plan.

43. (Previously Presented) A water craft as claimed in claim 42, wherein the interconnection means is arranged to functionally link the water engaging means such that when two adjacent water engaging means disposed on a first lateral side of the water craft are urged during use to move in a substantially upward vertical direction relative to the chassis portion, two adjacent water engaging means disposed on a second opposite lateral side of the water craft are restricted from moving in a substantially downward vertical direction relative to the chassis portion, thereby supporting the first and second lateral sides of the water craft in a roll axis.

44. (Previously Presented) A water craft as claimed in claim 43, wherein the rams and fluid conduits define a plurality of discrete fluid circuits, at least some of the fluid circuits including a first fluid conduit extending between upper chambers of a first pair of adjacent rams disposed on a first lateral side of the water craft, a second fluid conduit extending between lower chambers of a second pair of adjacent rams disposed on a second opposite lateral side of the water craft, and a third fluid conduit extending between the first fluid conduit and the second fluid conduit.

45. (Currently amended) A water craft as claimed in claim 42, comprising at least six water engaging means at least three water engaging means being disposed on a first lateral side of the water craft and at least ~~[[tree]]~~ three water engaging means being disposed on a second opposite lateral side of the water craft.

46. (Currently amended) A water craft as claimed in claim 44, comprising at least six water engaging means at least three water engaging means being disposed on a first lateral side of the water craft and at least ~~[[tree]]~~ three water engaging means being disposed on a second opposite lateral side of the water craft, wherein the third fluid conduit extends between a first fluid conduit of a first pair of adjacent rams disposed on the first lateral side of the water craft and a second fluid conduit of a transversely located pair of adjacent rams disposed on a second opposite lateral side of the water craft .

47. (Currently amended) A water craft as claimed in claim 44 comprising at least six water engaging means at least three water engaging means being disposed on a first lateral side of the water craft and at least ~~[[tree]]~~ three water engaging means being disposed on a second opposite lateral side of the water craft, wherein the third fluid conduit extends between a first fluid circuit portion of a first pair of adjacent rams disposed on the first lateral side of the water craft and a second fluid conduit of a diagonally located pair of adjacent rams disposed on a second opposite lateral side of the water craft .

48. (Previously Presented) A water craft as claimed in claim 37, further comprising a front left ram, a front right ram, and a front fluid conduit extending between the front left ram and the front right ram, the front left ram, the front right ram and the front fluid conduit defining a front fluid circuit which supports a front portion of the water craft in a pitch axis.

49. (Previously Presented) A water craft as claimed in claim 37, further comprising a rear left ram, a rear right ram, and a rear fluid conduit extending between the rear left ram and the rear right ram, the rear left ram, the rear right ram and the rear fluid conduit defining a rear fluid circuit which supports a rear portion of the water craft in a pitch axis.

50. (Previously Presented) A water craft as claimed in claim 37, further including at least one accumulator in fluid communication with at least one of the fluid conduits, each accumulator being arranged to absorb rapid movements of at least one of the water engaging means during use.

51. (Previously Presented) A water craft as claimed in claim 37, further comprising sensors usable to determine the orientation of the chassis portion relative to the water engaging means, and means for controlling the position of the water engaging means relative to the chassis portion in response to the sensors.

52. (Previously Presented) A water craft as claimed in claim 37, further comprising means for actively controlling the orientation of the chassis portion so as to modify the response of the water craft according to conditions during use.

53 (Previously Presented) A water craft as claimed in claim 52, wherein the means for actively controlling the orientation of the chassis portion is arranged to modify the response of the water craft to roll type forces according to conditions during use.

54 (Previously Presented) A water craft as claimed in claim 52, wherein the means for actively controlling the orientation of the chassis portion is arranged to modify the response of the water craft to pitch type forces according to conditions during use.

55 (Previously Presented) A water craft as claimed in claim 52, wherein the means for actively controlling the orientation of the chassis portion is arranged to raise or lower the chassis portion of the water craft according to conditions during use.

56. (Previously Presented) A water craft as claimed in claim 51, further comprising an electronic control unit (ECU) arranged to control the amount of fluid in the fluid circuits and thereby control the height and orientation of the chassis portion relative to the water engaging means.

57. (Previously Presented) A water craft as claimed in claim 37, further including at least one damper valve arranged to restrict fluid flow between interconnected rams.

58. (Previously Presented) A water craft as claimed in claim 57, wherein at least one damper valve is a controllable damper valve arranged to provide an adjustable level of damping.

59. (Previously Presented) A water craft as claimed in claim 58, wherein the controllable damper valve is arranged such that fluid flow through a fluid circuit during use effects relative movement between a magnetic member and a coil and thereby generation of an electrical current, the degree of damping provided by the controllable damper valve being proportional to the magnitude of electrical power drawn from the coil.

60. (Previously Presented) A water craft as claimed in claim 59, wherein the controllable damper valve includes a gear motor in circuit with a fluid circuit, the gear motor being arranged to turn when fluid flows in the fluid circuit, and a generator having a rotor caused to rotate when the gear motor rotates so as to thereby generate an electrical current.

61. (Previously Presented) A water craft as claimed in claim 60, wherein the controllable damper valve includes a piston portion and a cylinder portion, one of the piston portion and the cylinder portion being arranged to generate a magnetic field and the other of the piston portion and the cylinder portion including a coil, the piston portion being arranged to move relative to the cylinder portion when fluid flows in the fluid circuit so as to thereby generate an electrical current in the coil.

62. (Previously Presented) A water craft as claimed in claim 37, wherein the means for controlling the orientation of the water engaging means includes at least one control ram.

63. (Previously Presented) A water craft as claimed in claim 62, wherein the means for controlling the orientation of the water engaging means includes at least one sensor arranged to sense a parameter associated with operation of the water craft and to cause expansion or contraction of at least one control ram in response to the at least one sensor.

64. (Previously Presented) A water craft as claimed in claim 63, wherein the parameter associated with operation of the water craft is lateral force, pitch force, yaw force, or steering position.

65. (Previously Presented) A water craft as claimed in claim 37, wherein at least one of the water engaging means is connected to the chassis portion such that the water engaging means is arranged to tilt when the water engaging means moves in a substantially vertical direction relative to the chassis portion during use.

66. (Previously Presented) A water craft as claimed in claim 37, wherein at least one of the water engaging means is connected to the chassis portion using mechanical linkage means arranged to cause the water engaging means to tilt when the water engaging means moves in a substantially vertical direction relative to the chassis portion during use.

67. (Previously Presented) A water craft as claimed in claim 66, wherein the linkage means comprises a double wishbone.

68. (Previously Presented) A water craft as claimed in claim 37, wherein the water craft is arranged to facilitate movement of all water engaging means away from contact with the water during use so as to reduce drag at low speed.

69. (Previously Presented) A water craft as claimed in claim 37, wherein at least one of the water engaging means includes an underside surface arranged to contact the water surface during use, the underside surface being contoured so as to restrict side slippage of the water craft during use.

70. (Previously Presented) A water craft as claimed in claim 37, further including at least one damping means arranged to absorb energy from motions of at least one water engaging means relative to the chassis.

71. (Previously Presented) A water craft as claimed in claim 70, wherein each damping means is associated with a water engaging means and each damping means includes a first damping member and a second damping member arranged to move relative to the first damping member when the water engaging means moves relative to the chassis, the damping means being arranged such that relative movement between the first damping member and the second damping member effects relative movement between a magnetic member and a coil and thereby generation of an electrical current, the degree of damping provided by the damping means being proportional to the magnitude of electrical power drawn from the coil.

72. (Previously Presented) A water craft as claimed in claim 71, wherein the damping means includes a piston portion and a cylinder portion, one of the piston portion and the cylinder portion being arranged to generate a magnetic field and the other of the piston portion and the cylinder portion including a coil, the piston portion being arranged to move relative to the cylinder portion when a water engaging means moves relative to the chassis portion so as to thereby generate an electrical current in the coil.

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Page : 10 of 11

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73. (Previously Presented) A water craft as claimed in claim 72, wherein the damping means includes a fluid pump and a fluid storage device, the fluid pump being arranged to transfer fluid to the fluid storage device when a water engaging means moves relative to the chassis portion.

74. (Previously Presented) A water craft as claimed in claim 70, further including energy storage means arranged to store at least a portion of the energy absorbed by the damping means.

75. (Previously Presented) A water craft as claimed in claim 74, wherein the energy storage means includes a battery.